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(54) **WIRELESS HANDHELD DEVICE, SYSTEM, AND METHOD OF DETECTING AND STORING EMAIL SETTINGS**

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(51) **Int. Cl.**
H04M 3/00 (2006.01)

(52) **U.S. Cl.**
USPC **455/419**; 455/466; 455/417; 455/445; 709/206; 709/207; 379/265.09

(58) **Field of Classification Search** 455/412.1, 455/466, 418, 411, 410, 574, 445, 419; 370/252, 370/328; 709/206, 219, 21, 217, 248, 228, 709/225, 203, 218, 207; 726/3; 379/88.17, 379/265.09

See application file for complete search history.

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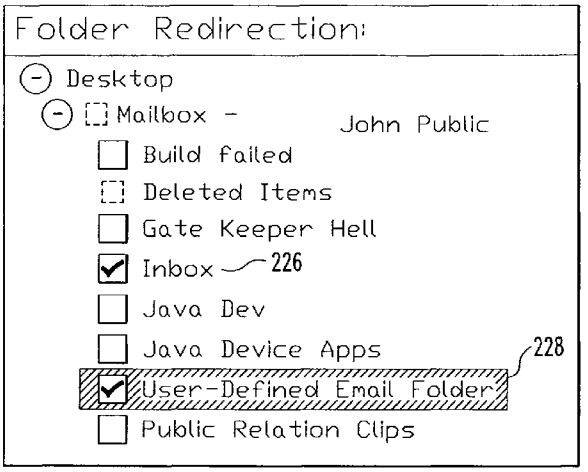
(57) **ABSTRACT**

A method and apparatus for changing settable email parameters in a system supporting email using a wireless device, the system including a wireless electronic device and a wireless network. Provided is a way of changing email settings on the wireless device, and storing those changes on both the device and, as needed or desired, on the wireless network. The wireless network and wireless device are adapted to wirelessly communicate with each other.

19 Claims, 7 Drawing Sheets



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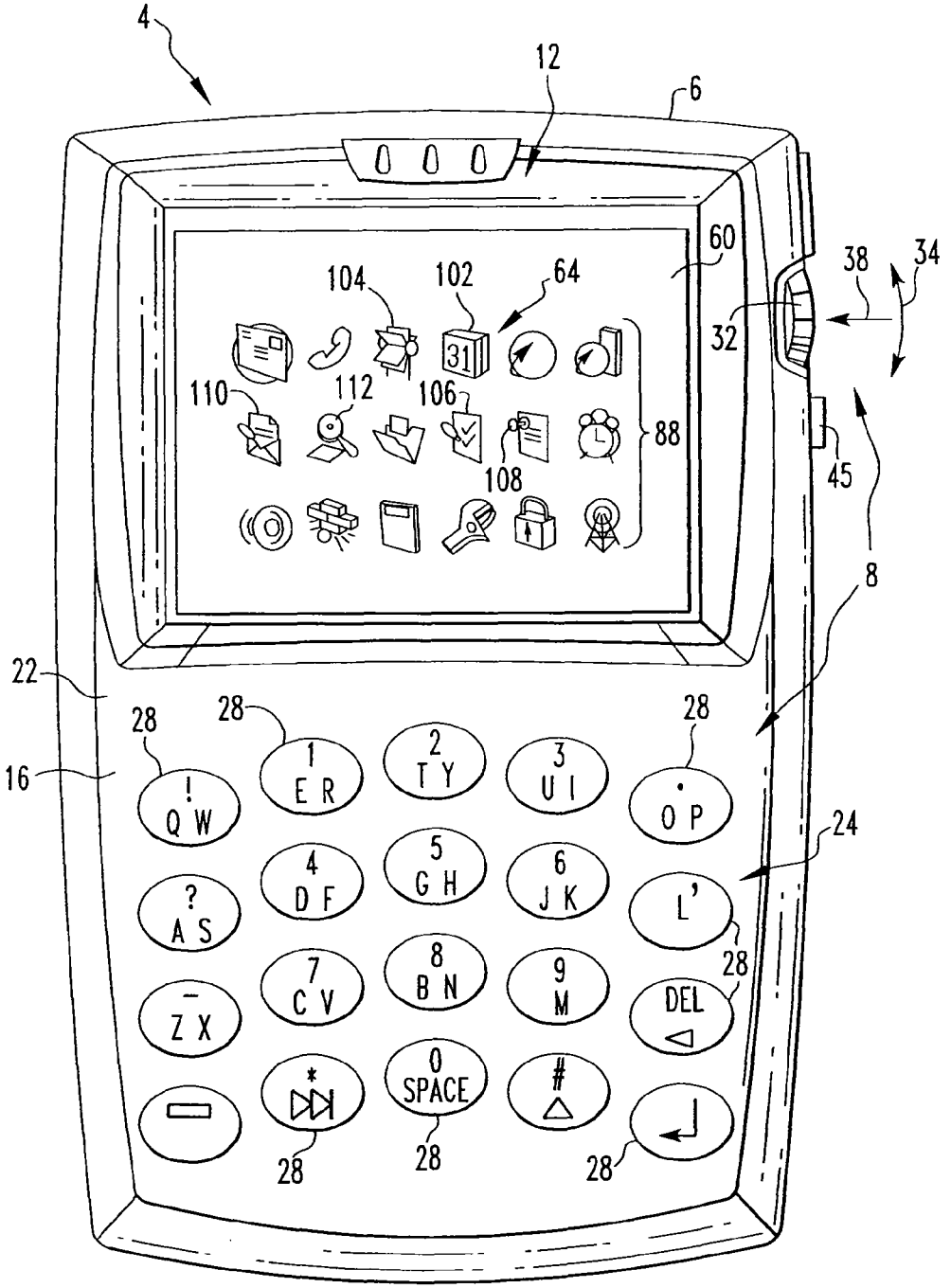
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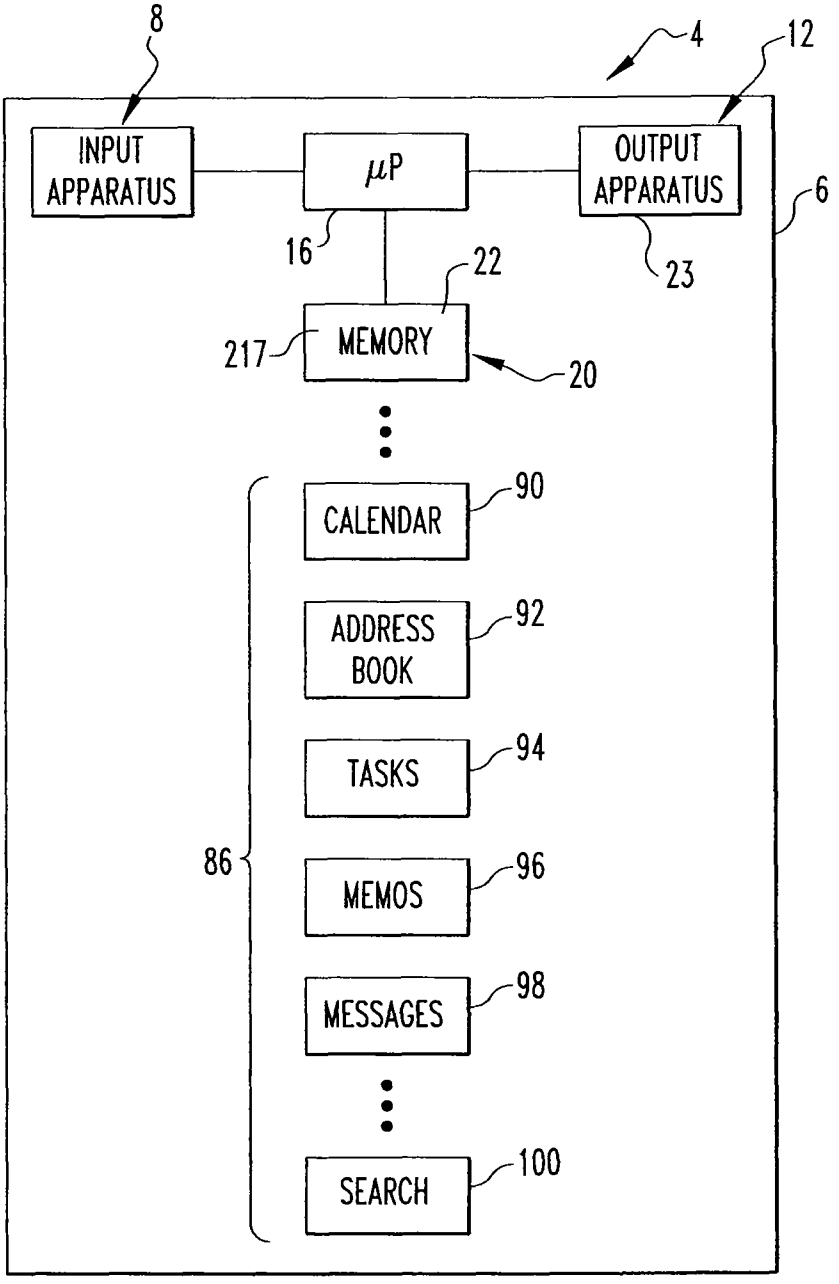
FIG.1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MEMOS
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FIG. 2

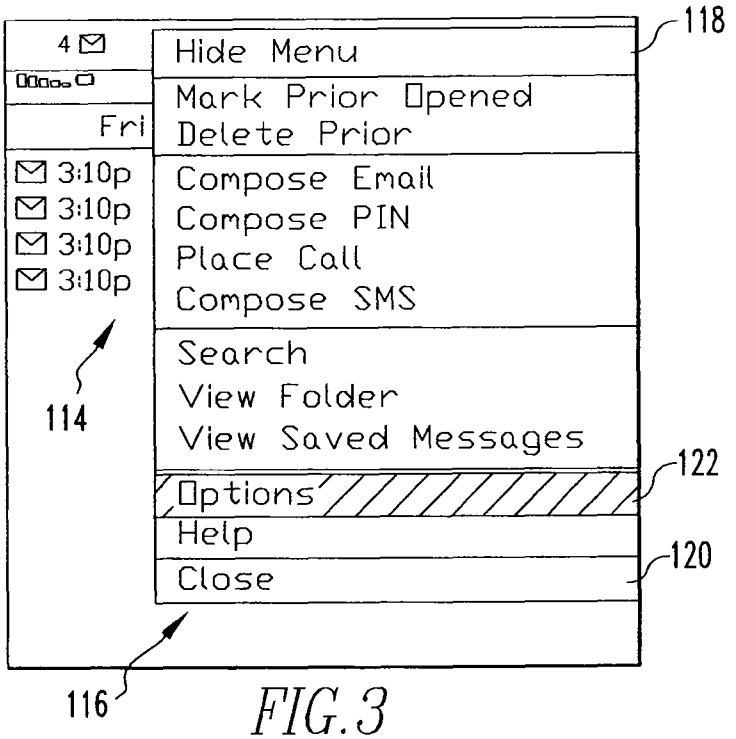


FIG.3

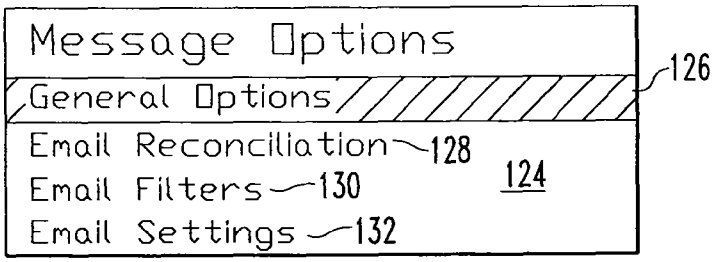
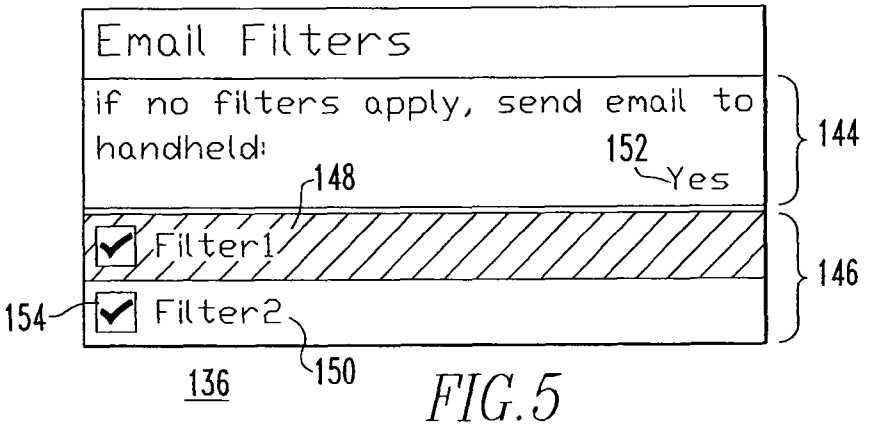


FIG.4



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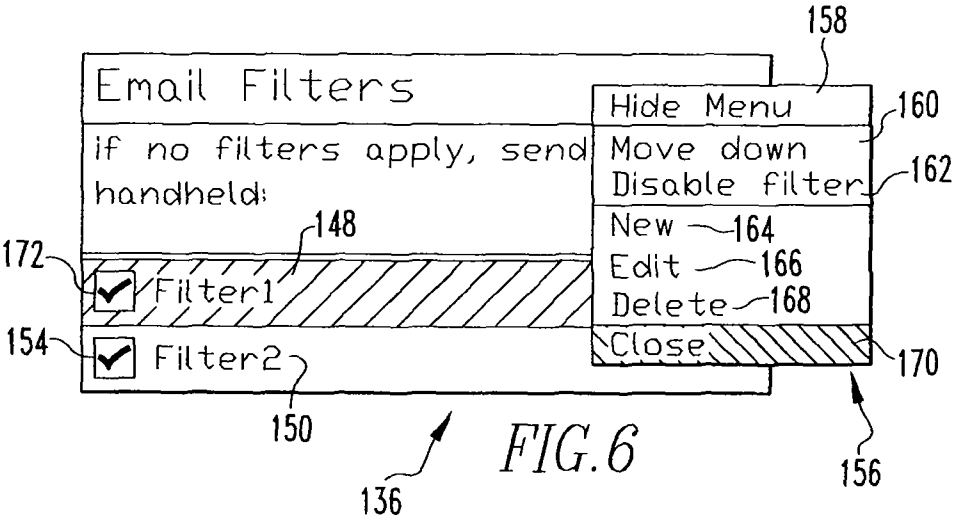

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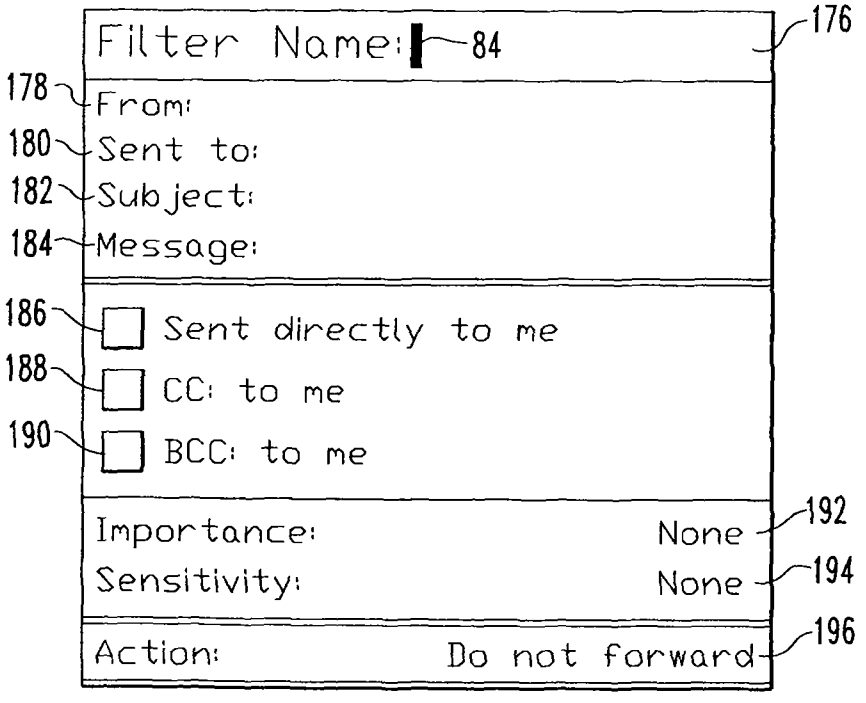
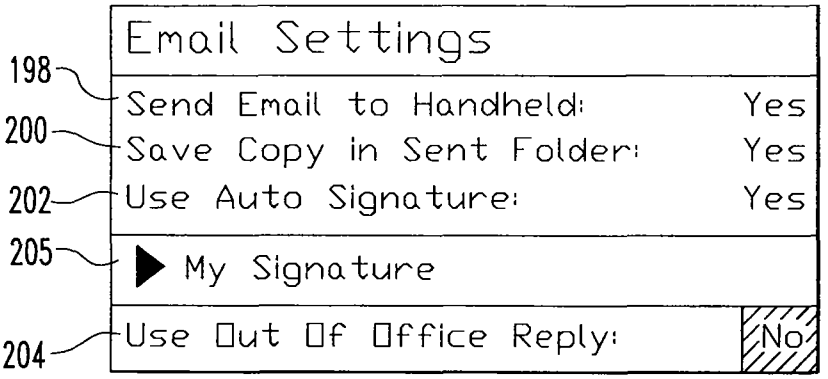


FIG.7 174



138 FIG.8

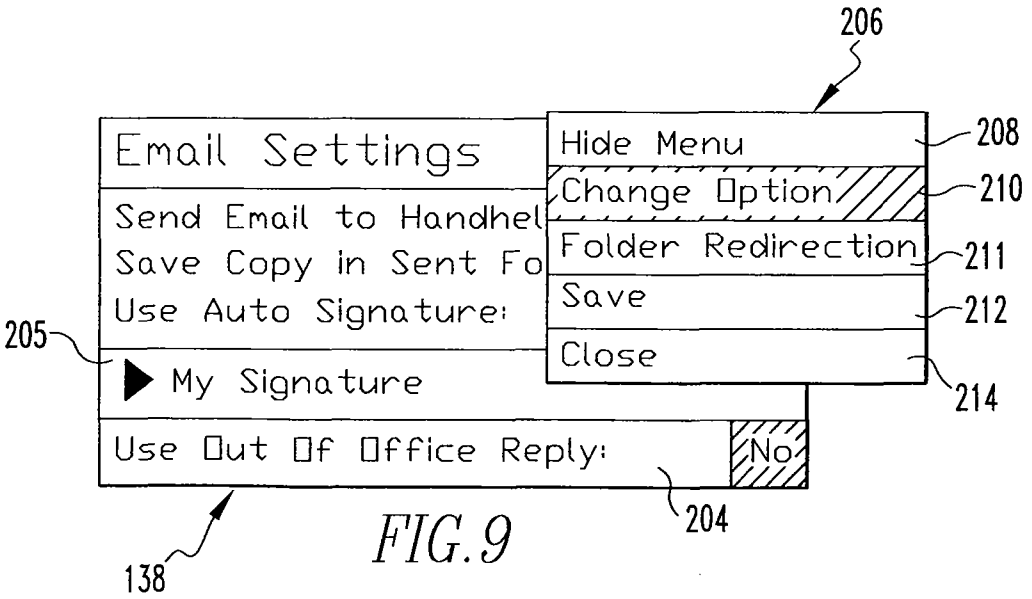


FIG.9

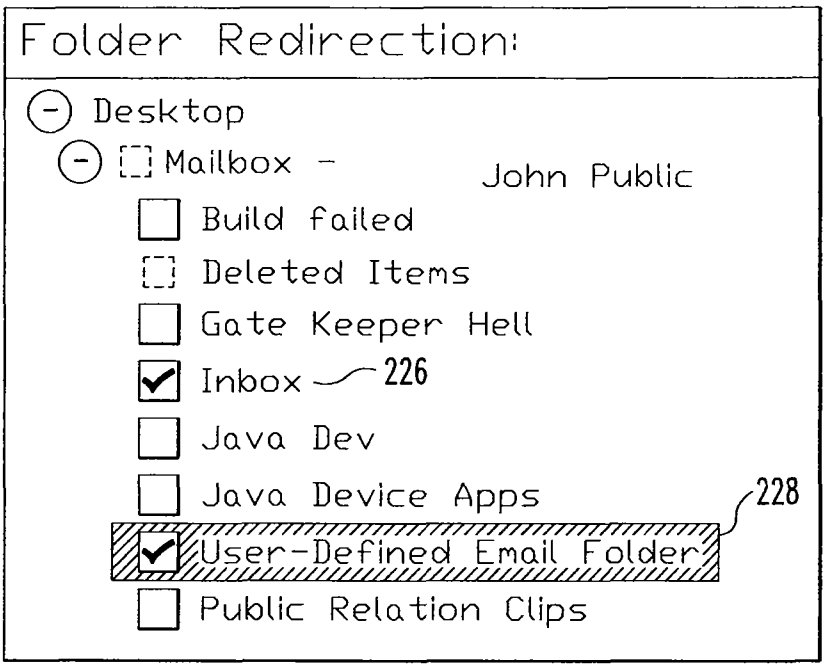


FIG.10 224

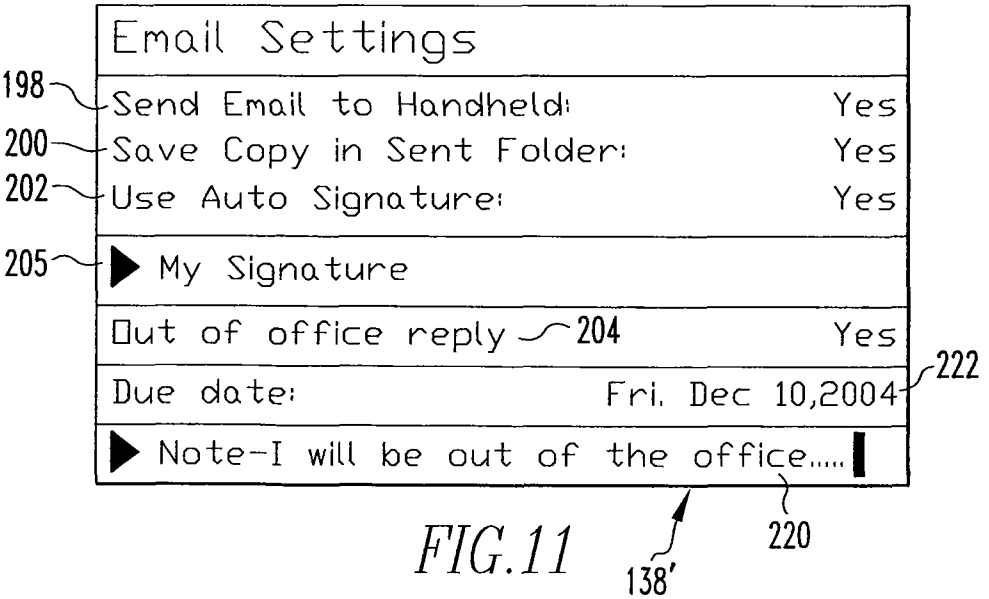


FIG.11

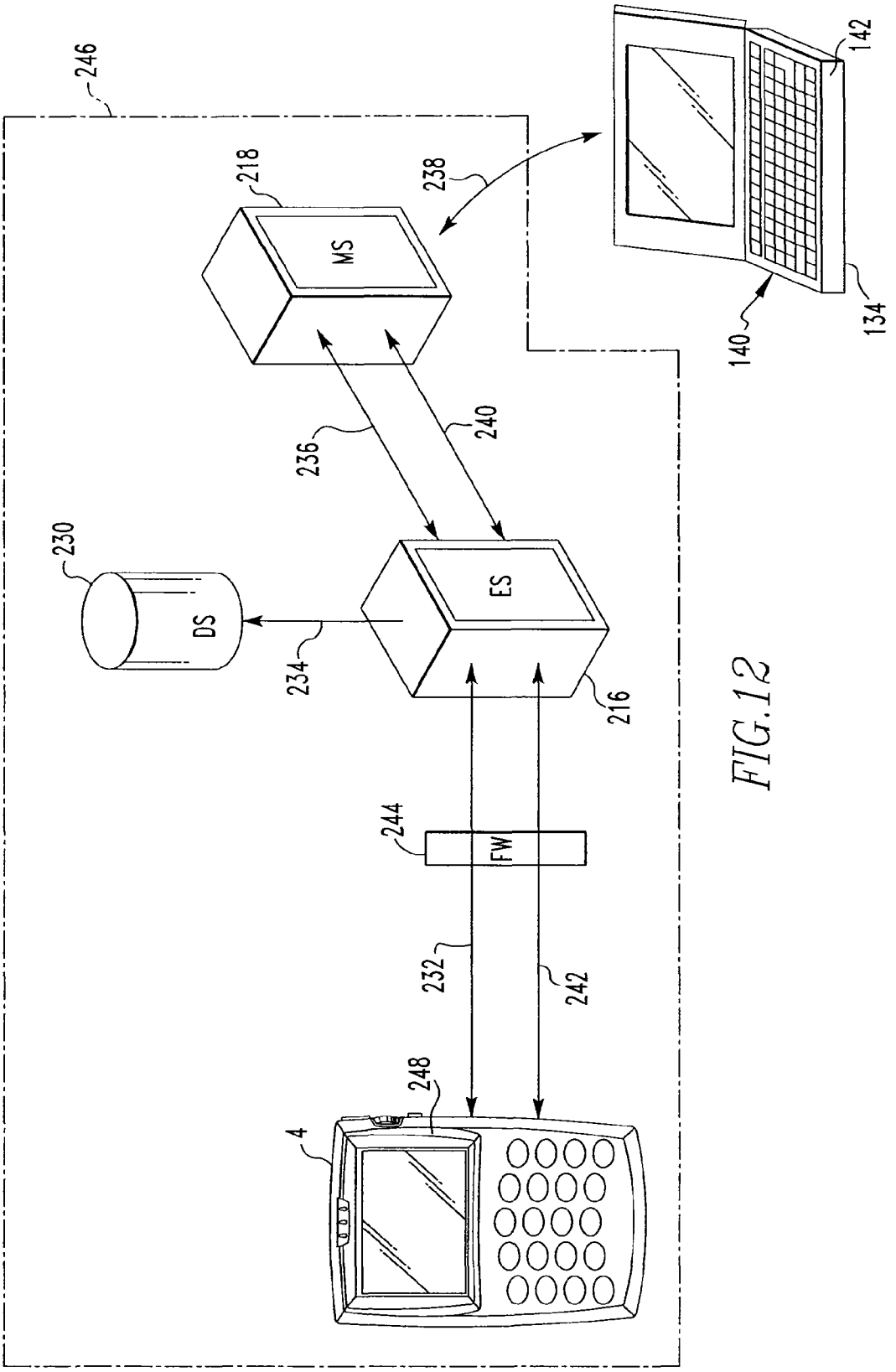

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FIG. 12

WIRELESS HANDHELD DEVICE, SYSTEM, AND METHOD OF DETECTING AND STORING EMAIL SETTINGS

This application is a continuation of application Ser. No. 11/734,868, filed Apr. 13, 2007 now U.S. Pat. No. 7,653,402, and entitled "Coordinated Changing Of Email Settings On Wireless Electronic Devices And Wireless Networks", which is a continuation of application Ser. No. 10/988,305, filed Nov. 12, 2004 now U.S. Pat. No. 7,218,926, and entitled "Method, Wireless Handheld Electronic Device And System Of Remotely Controlling E-Mail Settings From The Device".

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates generally to handheld electronic devices and, more particularly, to a handheld electronic device including an e-mail function. The invention also relates to a method or a system of remotely controlling e-mail settings from such a handheld electronic device.

2. Background Information

Numerous types of handheld electronic devices are known. Examples of such handheld electronic devices include, for instance, personal digital assistants (PDAs), handheld computers, two-way pagers, cellular telephones, and the like. Many handheld electronic devices also feature wireless communication capability, although many such handheld electronic devices are stand-alone devices that are functional without communication with other devices.

Electronic mail (email or e-mail) is used to send messages over networks and over the Internet. Electronic messaging has become a ubiquitous means of communication for both business and personal use. Devices that process electronic messages typically maintain a message list identifying electronic messages received for reading and processing by the recipient. Such processing can include, for example, replying to, forwarding to others, deleting and filing the messages.

It is known to configure e-mail settings for wireless handheld electronic devices from a software utility at a desktop personal computer that interfaces with a wireless enterprise server over, for example, the Internet. Such e-mail settings may include, for example, e-mail filter settings, e-mail redirection settings, save copy of e-mail in a sent folder settings, e-mail auto-signature settings, and out-of-office reply e-mail settings. For example, an e-mail filter setting is a setting that blocks certain e-mail messages based upon user-selected criteria. An e-mail redirection setting enables and disables the redirection of e-mail messages from a user's normal e-mail system to the user's wireless handheld electronic device. Such settings may also redirect e-mail messages from selected folders (e.g., Inbox; Spam) in the user's normal e-mail system. An e-mail auto-signature setting enables and disables appending predefined text to an e-mail message that is sent from a wireless handheld electronic device. An out-of-office reply e-mail setting enables or disables sending a predefined reply e-mail message from a wireless handheld electronic device in response to an e-mail message that is received by such device. For example, the out-of-office reply e-mail setting is configurable via a program, such as, for example, Microsoft® Outlook® or Lotus Notes® on a personal computer. The other e-mail settings (e.g., auto-signature; redirected folders; e-mail redirection) are controlled via desktop software on a personal computer.

There exists the need for users of wireless handheld electronic devices to remotely control their e-mail settings from such devices without having to use a software utility at, for example, a desktop personal computer. Accordingly, there is room for improvement in wireless handheld electronic devices and related systems and methods.

SUMMARY OF THE INVENTION

These needs and others are met by the invention, which provides a user interface on a wireless handheld electronic device, in order to remotely control e-mail settings for the device without using a software utility at, for example, a desktop personal computer.

In accordance with one aspect of the invention, a method of changing e-mail settings on a wireless handheld device comprises: detecting an email setting displayable on the wireless handheld device; saving the detected email setting in the wireless handheld device, such that the detected email setting is retrievable at a later time; sending, using a wireless output communications port of the wireless handheld device, the detected email setting in a manner receivable by a wireless server and uniquely associable with the sending wireless handheld device; and using, as needed by a message application of the wireless handheld device, the detected email setting.

As another aspect of the invention, a mobile wireless handheld device comprises: wireless input and output ports; a memory; a display; at least one input device configured to be usable by a user of the wireless handheld device; software comprising at least a message application, retrievably stored in the memory; and a processor operatively coupled to the wireless input and output ports, the memory, the display, the at least one input device, and structured to retrieve and run the software, where the software is further configured to run on the processor, and further where the software and the processor are configured to be able to retrieve and save a plurality of email settings, the email settings further saved in a manner usable by the message application, to enable display of changeable email settings and detection of changes to the email settings by the at least one input device, to save detected changes to email settings in a manner usable by the software, and to send, through the output port, wireless communications configured to be receivable by a wireless server where the detected changes to the email settings are uniquely associable with the wireless handheld device.

As another aspect of the invention, a method of changing e-mail settings on a wireless network comprises: providing storage for email settings on the wireless network, the storage enabled for retrievably storing email settings associated with a specific wireless device; receiving, on the wireless network, a communication comprised of at least one email setting associable with the specific wireless device, where the received at least one email setting has the property of being changeable by an input device on the specific wireless device; saving, in the storage, the received at least one email setting in a manner associated with the specific wireless device; and retrieving, at a time later than the saving, the saved at least one email setting and enabling for retrieval any other information in the storage associated with the specific wireless device.

As another aspect of the invention, a method of remotely controlling e-mail settings comprises: maintaining at least one of the e-mail settings at a wireless enterprise server; associating at least one of the e-mail settings with the wireless handheld electronic device; and enabling remote control of at least one of the e-mail settings at the wireless enterprise server through wireless communication between the wireless enterprise server and the wireless handheld electronic device.

The e-mail setting may be an e-mail filter setting, and the wireless handheld electronic device may be employed to create, display, edit or delete the e-mail filter setting.

The e-mail setting may be an e-mail redirection setting, and the wireless handheld electronic device may be employed to enable or disable the e-mail redirection setting. At least one folder corresponding to a predetermined category of e-mail messages may be included with the e-mail redirection setting. The wireless handheld electronic device may be employed to select at least one of the at least one folder.

At least one folder for at least one e-mail message may be associated with the e-mail redirection setting. An e-mail message for one of the at least one folder may be forwarded or redirected to the wireless handheld electronic device. The wireless handheld electronic device may be employed to enable or disable the forwarding or redirecting for the one of the at least one folder.

The e-mail setting may be an out-of-office reply e-mail setting, and the wireless handheld electronic device may be employed to create, enable, edit or disable the out-of-office reply e-mail setting. The out-of-office reply e-mail setting may be automatically disabled at a predetermined date. The wireless handheld electronic device may be employed to edit the predetermined date.

The e-mail setting may be associated with saving a copy of a sent e-mail in a sent folder. The wireless handheld electronic device may be employed to enable or disable the e-mail setting associated with saving a copy of a sent e-mail in a sent folder.

The e-mail setting may be an auto signature e-mail setting. The wireless handheld electronic device may be employed to enable or disable the auto signature e-mail setting. A text field may be associated with the auto signature e-mail setting, and the wireless handheld electronic device may be employed to edit the text field.

As another aspect of the invention, a system comprises: a wireless handheld electronic device comprising a plurality of e-mail settings associated therewith; and at least one server comprising a database maintaining at least one of the e-mail settings, at least one of the at least one server being adapted to wirelessly communicate with the wireless handheld electronic device. The wireless handheld electronic device is adapted to remotely control at least one of the e-mail settings at the at least one server through wireless communication between the at least one server and the wireless handheld electronic device.

The at least one server may comprise a wireless enterprise server and an e-mail server. The at least one of the e-mail settings may comprise an out-of-office reply e-mail setting. The wireless handheld electronic device may be further adapted to input a change to the out-of-office reply e-mail setting and to wirelessly send the change to the wireless enterprise server. The wireless enterprise server may be adapted to forward the change to the e-mail server.

The e-mail server may be adapted to independently update a change to the out-of-office reply e-mail setting from a remote personal computer or from a remote client device including mail client software. The wireless enterprise server may be further adapted to periodically monitor the out-of-office reply e-mail setting of the e-mail server and to wirelessly send a change thereof to the wireless handheld electronic device.

The at least one server may comprise a wireless enterprise server. The wireless handheld electronic device may be further adapted to input a plurality of changes to the e-mail settings and to wirelessly send the changes to the wireless enterprise server. The wireless enterprise server may be adapted to update the at least one of the e-mail settings in the database based upon the changes.

The at least one server may further comprise an e-mail server. The at least one of the e-mail settings may comprise an out-of-office reply e-mail setting. The wireless handheld electronic device may be further adapted to input a change to the out-of-office reply e-mail setting and to wirelessly send the change to the wireless enterprise server. The wireless enterprise server may be adapted to forward the change to the e-mail server.

As another aspect of the invention, a wireless handheld electronic device comprises: an input apparatus; a wireless communication port; a memory including a plurality of e-mail settings associated with the wireless communication port; and a processor cooperating with the input apparatus, the wireless communication port and the memory to remotely control at least one of the e-mail settings at a wireless server through wireless communication with the wireless communication port.

BRIEF DESCRIPTION OF THE DRAWINGS

A full understanding of the invention can be gained from the following description of the preferred embodiments when read in conjunction with the accompanying drawings in which:

FIG. **1** is a top plan view of a wireless handheld electronic device in accordance with the invention.

FIG. **2** is a schematic depiction of the wireless handheld electronic device of FIG. **1**.

FIG. **3** is an example of a Message List and a corresponding menu screen of the display of FIG. **1**.

FIG. **4** is an example of a Message Options menu screen that is displayed after making a selection from the menu screen of FIG. **3**.

FIG. **5** an example of an Email Filters display screen that is displayed after making a selection from the menu screen of FIG. **4**.

FIG. **6** an example of the Email Filters display screen of FIG. **5** and the corresponding menu screen.

FIG. **7** an example of a Filter display screen that is displayed after making a selection from the menu screen of FIG. **6**.

FIG. **8** is an example of an Email Settings display screen that is displayed after making a selection from the menu screen of FIG. **4**.

FIG. **9** an example of the Email Settings display screen of FIG. **8** and the corresponding menu screen.

FIG. **10** is an example of a Folder Redirection display screen that is displayed after making a selection from the menu screen of FIG. **9**.

FIG. **11** is an example of the Email Settings display screen that is displayed after making a selection from the corresponding menu screen of FIG. **9**.

FIG. **12** is a block diagram showing a wireless handheld electronic device, a wireless enterprise server and database store, a mail server and a personal computer (PC) in accordance with an embodiment of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

As employed herein, the terms "e-mail setting" or "e-mail settings" mean one, some or all of e-mail filter setting(s), e-mail redirection setting(s), e-mail setting(s) associated with saving a copy of a sent e-mail in a sent folder, auto-signature e-mail setting(s), and out-of-office reply e-mail setting(s).

The invention is described in association with a wireless handheld electronic device, although the invention is applicable to a wide range of handheld electronic devices.

A wireless handheld electronic device **4** is indicated generally in FIG. **1** and is depicted schematically in FIG. **2**. The example device **4** includes a housing **6** upon which are disposed a processor unit that includes an input apparatus **8**, an output apparatus **12**, a processor **16** (as shown in FIG. **2**), a memory **20** (FIG. **2**), and a plurality of routines **22** (FIG. **2**). The processor **16** may be, for instance, and without limitation, a microprocessor (μP) that responds to inputs from the input apparatus **8** and provides output signals to the output apparatus **12**, which includes a wireless communications port **23** (FIG. **2**). The processor **16** also interfaces with the memory **20**. Examples of handheld electronic devices are included in U.S. Pat. Nos. 6,452,588 and 6,489,950, which are incorporated by reference herein.

As can be understood from FIG. **1**, the input apparatus **8** includes a keypad **24** and a thumbwheel **32**. The wireless handheld electronic device **4**, as shown, employs a user interface including, for example, the keypad **24** and the thumbwheel **32** for user interface navigation. As an alternative to the thumbwheel **32**, a wide range of cursor positioning and/or function selecting mechanisms or other suitable user input devices (e.g., a touch pad; a joystick button), whether presently known or unknown, may be employed.

Continuing to refer to FIG. **1**, the keys **28** are disposed on a front face of the housing **6**, and the thumbwheel **32** is disposed at a side of the housing **6**. The thumbwheel **32** can serve as another input member and is both rotatable, as is indicated by the arrow **34**, to provide selection inputs to the processor **16**, and also can be pressed in a direction generally toward the housing **6**, as is indicated by the arrow **38**, to provide another selection input to the processor **16**.

Another key, the <ESC> key **45** is disposed on the side of the housing **6** adjacent the thumbwheel **32**, although the same or similar key may be disposed as part of the keypad **24**.

The memory **20** (FIG. **2**) can be any of a variety of types of internal and/or external storage media such as, without limitation, RAM, ROM, EPROM(s), EEPROM(s) and/or the like that provide a storage register for data storage such as in the fashion of an internal storage area of a computer, and can be volatile memory or nonvolatile memory. The memory **20** additionally includes the routines **22** for the processing of data. The routines **22** can be in any of a variety of forms such as, without limitation, software, firmware, and the like.

Referring again to FIG. **1**, the output apparatus **12** includes a display **60** upon which is provided an example output **64**. The display **60** may also include a caret (e.g., cursor) **84** (FIG. **7**) that depicts generally where the next input from the input apparatus **8** will be received. The output **64** of FIG. **1** is depicted as displaying a home screen that represents a number of applications **86** (FIG. **2**) depicted as corresponding discrete icons **88**. The applications **86** include, for example, a Calendar application **90**, an Address Book application **92**, a Tasks application **94**, a MemoPad (Memos) application **96**, a Messages application **98** and a Search application **100**. The corresponding icons **88** include, for example, the Calendar icon **102**, the Address Book icon **104**, the Tasks icon **106**, the MemoPad icon **108**, the Messages icon **110** and the Search icon **112**, respectively. Although various applications and icons are shown, a wide range of fewer or greater applications and icons may be employed.

In FIG. **1**, the home screen output **64** is currently active and would constitute another one of the applications **86**. One of the other applications **86**, such as the Messages application **98**, can be initiated from the home screen output **64** by providing a suitable input through the input apparatus **16**, such as by suitably rotating the thumbwheel **32** and providing a selection input by translating the thumbwheel **32** in the direction indicated by the arrow **38**. For example, the home screen output **64** displays the icon **110** associated with the Messages application **98**.

FIG. **3** is an example of a message list **114** and a corresponding menu screen **116** of the display **60** of FIG. **1**. The message list **114** is displayed by the processor **16** responsive to the initiation of the Messages application **98** (FIG. **2**), as was discussed above. The menu screen **116** is displayed by the processor **16** from the Messages application **98** responsive to the processor detecting another input through the input apparatus **16**, such as by providing a selection input by translating the thumbwheel **32** in the direction indicated by the arrow **38** (FIG. **1**). Within the menu screen **116**, there are menu items including, for example, a Hide Menu item **118**, which when selected causes the menu screen **116** to be removed from the display **60**, a Close item **120**, which when selected causes the Messages application **98** to close and the home screen output **64** (FIG. **1**) to be redisplayed, and an Options item **122**. When the Options item **122** is selected, in the same manner that has been described, the Message Options menu screen **124** of FIG. **4** is displayed.

The menu screen **124** includes a General Options item **126**, an Email Reconciliation item **128**, an Email Filters item **130**, and an Email Settings item **132**. The General Options item **126**, when selected, permits the user to set conventional e-mail client settings (e.g., Display Time; Display Name; Confirm Delete) on the handheld electronic device **4**. The Email Reconciliation item **128**, when selected, provides a conventional bi-directional e-mail reconciliation between the user's main e-mail processor (e.g., a personal computer (PC) **134** (FIG. **12**), desktop or workstation) and the handheld electronic device **4**. Although the items **126** and **128** are shown, one or both of these items need not be employed. Selecting the Email Filters item **130** causes the Email Filters display **136** of FIG. **5** to be displayed. Similarly, selecting the Email Settings item **132** causes the Email Settings display **138** of FIG. **8** to be displayed.

As will be explained, starting from the Message Options menu screen **124**, the user may control various different e-mail settings such as, for example, e-mail filter settings (FIGS. **5-7**), auto signature e-mail settings (FIG. **8**), e-mail folder redirection settings (FIG. **10**) and out-of-office reply e-mail settings (FIG. **11**). As will be discussed, below, in connection with FIG. **12**, the e-mail settings **248**, which are created, displayed, edited and/or deleted by the wireless handheld electronic device **4**, permit the software utility **140** of the PC **134** (FIG. **12**) to not be required for day-to-day usage. As a result, users can configure important e-mail settings from the wireless handheld electronic device **4**. Those e-mail settings **248** may also be found, for example, in a Redirector Settings component **142** of the PC software utility **140**.

Referring to FIGS. **5-7**, the user can create (FIGS. **6** and **7**), display (FIGS. **5-7**), edit (FIGS. **6** and **7**) and delete (FIG. **6**) various e-mail filters. As shown in the Email Filters display **136** of FIG. **5**, there is a first display portion **144** and a second display portion **146** including two example filters **148** (Filter**1**) and **150** (Filter**2**). The first display portion **144** shows that if no filters apply, then an e-mail message will be sent to the wireless handheld electronic device **4** as indicated by the redirection setting **152** (Yes). If, however, the setting **152** was "No," then e-mail messages that do not meet the various filter criteria are not forwarded or redirected to the wireless handheld electronic device **4**. In this example, there are two

enabled (e.g., as indicated by the example checks, such as **154**) filters **148**,**150**, although there may be one or more filters each of which may be independently enabled or disabled (e.g., the absence of a check (not shown)).

As shown in FIG. **6**, a menu screen **156** can be initiated from the display **136** by providing a suitable input through the input apparatus **16**, such as by suitably rotating the thumbwheel **32** (FIG. **1**) (e.g., to select Filter**1** **148**, as shown) and providing a selection input by translating the thumbwheel **32** in the direction indicated by the arrow **38**. The menu screen **156** for the enabled Filter**1** **148** includes a Hide Menu item **158**, a Move down item **160**, a Disable filter item **162**, a New item **164**, an Edit item **166**, a Delete item **168** and a Close **170** to exit from the Email Filters display **136**. Selecting one of those items (even numbers **158**-**170**) provides one of the following seven actions: (1) the Hide Menu item **158** removes the menu screen **156** from the display **60** (FIG. **1**); (2) the Move down item **160** causes the selected e-mail filter to be moved down in priority below the next e-mail filter (e.g., Filter**2** **150** would be executed prior to Filter**1** **148**, in order to attempt to filter out forwarding of an e-mail message to the device **4**); (3) the Disable filter item **162** disables the selected e-mail filter (e.g., causing the check **172** to be removed (not shown)); (4) the New item **164** displays the Filter display screen **174** of FIG. **7** and allows the user to create a new email filter; (5) the Edit item **166** displays a display screen (not shown) for the selected e-mail filter that is similar to the screen **174** except that it includes information previously entered for that selected e-mail filter; (6) the Delete item **168** causes the selected e-mail filter to be deleted and removed from the screen **136**; and (7) the Close item **170** removes the display **136** and redisplays the menu screen **124** (FIG. **4**). If the selected e-mail filter is disabled (not shown), then the Disable filter item **162** is displayed as "Enable filter". If the selected e-mail filter is at the bottom of the screen **136** (e.g., such as Filter**2** **150**), then the Move down item **160** is displayed as "Move up".

As shown in the Filter display screen **174** of FIG. **7**, each of the e-mail filters includes a number of entry fields, such as **176**,**178**,**180**,**182**,**184**, that define the new or previously created e-mail filter. For example, the field **176** defines the e-mail filter name (e.g., Filter**1**; Filter**2**, as shown in FIG. **6**). Zero, one, some or all of the fields **178**,**180**,**182**,**184** may be employed to filter an e-mail message based upon the sender as selected by field **178**, the recipient as selected by field **180**, the message subject as selected by field **182**, and the message contents as selected by field **184**. Furthermore, zero, one, some or all of the check boxes **186**,**188**,**190** may be employed to filter an e-mail message that is sent directly to the user as selected by check box **186**, that is ("carbon") copied ("CC") to the user as selected by check box **188** and/or that is ("blind carbon") copied ("BCC") to the user as selected by check box **190**. Also, one or both of the fields **192**,**194** may be employed to filter an e-mail message that includes an importance setting (e.g., high; normal; low; none) as selected by field **192** or a sensitivity setting (e.g., personal; confidential; private; normal; Thank You!; none) as selected by field **194**. Further, there is a field **196** that defines the action taken (e.g., do not forward) if the test of the corresponding e-mail filter is true.

EXAMPLE 1

For example, Filter**1** **148** would include "Filter**1**" in field **176** (FIG. **7**) and may include "JohnSmith@xyz.com" in the from field **178** and the check box **186** being checked. As a result, e-mail messages from JohnSmith@xyz.com sent directly to the user of the device **4** would not be forwarded to the user's wireless handheld.

EXAMPLE 2

For example, Filter**2** **150** would include "Filter**2**" in field **176** (FIG. **7**) and may include "Low Rate Mortgage" in the subject field **182**. As a result, any e-mail messages including that text in the subject field would not be forwarded.

FIGS. **5**-**7** show that users can now perform any or all of the following actions directly from the device **4** without requiring any PC **134** (FIG. **12**): (1) view e-mail filters (FIGS. **5**-**7**); (2) edit e-mail filters (FIGS. **6** and **7**); (3) delete e-mail filters (FIGS. **6**); and (4) create new e-mail filters (FIGS. **6** and **7**).

The Email Settings display **138** of FIG. **8** is displayed after selecting the corresponding item **132** from the menu screen **124** of FIG. **4**. The display **138** includes various e-mail settings, such as, for example, an e-mail redirection setting **198** (e.g., Send Email To Handheld), an e-mail setting **200** associated with saving a copy of a sent e-mail in a sent folder (e.g., Save Copy In Sent Folder), an auto signature e-mail setting **202** (e.g., Use Auto Signature), and an out-of-office reply e-mail setting **204** (e.g., Use Out Of Office Reply). Those e-mail settings **198**,**200**,**202**,**204** may individually be enabled (e.g., Yes) or disabled (e.g., No). Although example e-mail setting selections are shown, none, one, some or all may be enabled and none, one, some or all may be disabled. Since the auto signature e-mail setting **202** is enabled, also displayed is the corresponding auto signature text **205** (e.g., in this example, My Signature).

FIG. **9** shows the display screen **138** of FIG. **8** and the corresponding menu screen **206** that is displayed by the processor **16** (FIG. **2**) responsive to the processor detecting another input through the input apparatus **16**, such as by providing a selection input by translating the thumbwheel **32** in the direction indicated by the arrow **38** (FIG. **1**). The menu screen **206** includes menu items **208**,**210**,**211**,**212**,**214**. Selecting one of those menu items **208**,**210**,**211**,**212**,**214** provides one of the following five actions: (1) the Hide Menu item **208** removes the menu screen **206** from the display **60** (FIG. **1**); (2) the Change Option item **210** either toggles the selected one of the e-mail settings **198**,**200**,**202**,**204** (e.g., selected e-mail setting **204**, in this example, would toggle from No to Yes); (3) the Folder Redirection item **211** brings up the display screen **224** shown in FIG. **10**; (4) the Save item **212** saves the current e-mail settings **198**,**200**,**202**,**204** in the memory **20** (FIG. **2**) of the device **4** and, also, remotely controls the corresponding e-mail settings in the wireless enterprise server **216** and/or mail server **218** (FIG. **12**); and (5) the Close item **214** removes the display screen **138** and redisplays the menu screen **124** (FIG. **4**).

EXAMPLE 3

For example, if the user edits one, some or all or the e-mail settings **198**,**200**,**202**,**204** and/or the text fields **205** or **220** (FIG. **11**) and then selects the

Save item **212**, that information is saved in the memory **20** (FIG. **2**) and, also, is wirelessly communicated by the device **4** to the wireless enterprise server **216** as will be discussed, below, in connection with FIG. **12**.

If the e-mail setting Send Email To Handheld **198** is enabled (Yes), then if none of the rules of the e-mail filters (e.g., FIG. **5**) apply, then the e-mail message is forwarded or redirected to the device **4** by the wireless enterprise server **216** (FIG. **12**). FIGS. **8** and **9** show that the user can view and

change the e-mail redirection setting **198** by selecting the particular e-mail setting with the thumbwheel **32**, displaying the menu **206**, and selecting the Change Option item **210**.

If the e-mail setting Save Copy In Sent Folder **200** is enabled (Yes), then the processor **16** (FIG. **2**) saves a copy of the e-mail message in a sent folder **217** (FIG. **2**) in the memory **20** of the device **4**. FIGS. **8** and **9** show that the user can view and change the e-mail setting **200**.

If the e-mail setting Use Auto Signature **202** is enabled (Yes), then the text **205** is appended by the e-mail server **218** (FIG. **12**) to any e-mail messages that are sent by the device **4**. FIGS. **8** and **9** show that the user can view and change the e-mail setting **202** and/or create, view and edit the corresponding text field **205** operatively associated with the setting **202**. For example, the text field **205** could be edited to alternatively state "Sent From My Wireless Handheld".

If the e-mail setting Use Out Of Office Reply **204** is enabled (Yes), then the mail server **218** (FIG. **12**) sends a predefined reply e-mail message to any e-mail message that is sent to the user's email address/account. FIGS. **8**, **9** and **11** show that the user can view and change the e-mail setting **204** and/or create, view and edit the corresponding text field **220** (e.g., "Note—I will be out of the office . . . ") (FIG. **11**) or due date **222** (e.g., Fri, Dec. 10, 2004) (FIG. **11**). For example, the due date **222** could be edited to alternatively state "Sat, Dec. 11, 2004").

FIG. **10** shows an example of a Folder Redirection display screen **224** that is displayed after making a selection from the menu **206** of FIG. **9**. The user may employ a menu screen (not shown) similar to the menu screen **206** (FIG. **9**) to edit the Folder Redirection settings wirelessly from the device **4**. This allows the user to specify e-mail folders (e.g., without limitation, Inbox **226**; User-defined email folder **228**) for which corresponding e-mail messages are redirected or forwarded to the device **4**. It will be appreciated that none, one, some or all of the various folders of the screen **224** may be selected or de-selected by the device **4**.

FIG. **11** shows as screen **1389** the e-mail settings display screen **138** of FIG. **8** after selecting the corresponding menu item **132** of FIG. **4** or after changing the setting **204** of FIG. **9**. This shows that the user can also edit the Out of Office reply e-mail setting **204** wirelessly from the device **4**. The user can enable/disable that setting **204**, which is also automatically disabled if the mail server **218** (FIG. **12**) (e.g., a Lotus Notes® or Domino® mail server) supports such a setting, by the device **4** and by the mail server **218** (FIG. **12**) as of the specified due date **222**. The user can also create and edit the auto-reply text **220**. In contrast, Microsoft® Outlook® or Microsoft Exchange Server® does not automatically disable such an e-mail setting **204**.

Referring to FIG. **12**, the wireless handheld electronic device **4**, the wireless enterprise server (ES) **216** and a database store (DS) **230** of user e-mail settings, the mail server (MS) **218** and the personal computer (PC) **134** are shown. First, the user makes one or more changes on the wireless handheld electronic device **4** to an e-mail setting (e.g., e-mail filters, such as **148**,**150** of FIG. **6** ; e-mail redirection setting **198** (FIG. **8**); save copy in sent folder e-mail setting **200**; use auto-signature e-mail setting **202**; out-of-office reply e-mail setting **204**). Responsive to the selection of the Save item **212** (FIG. **9**), the one or more change(s) is (are) then sent to the wireless enterprise server (ES) **216** over a wireless connection at **232**. Next, at **234**, the ES **216** updates the e-mail setting(s) for this user in a suitable store, such as the user e-mail settings database store (DS) **230**, which is employed by the ES **216**. If the e-mail setting(s) include the out-of-office reply e-mail setting **204**, then this e-mail setting is forwarded, at **236**, to update the mail server **218** (e.g., Microsoft Exchange Server®) as that e-mail setting **204** is not a wireless enterprise-related setting and, instead, is a mail server setting.

In this example, the e-mail setting **204** is the only e-mail setting that affects the core mail server behavior. The other e-mail settings are enterprise e-mail settings and are stored in the mail server **218** (in the user's account) in order that the desktop software utility **140** can access them, but are only executed on by the enterprise server **216**, the device **4**, and (optionally) the desktop software utility **140**.

Although not required, alternatively, the various e-mail setting(s) may also be updated by the user via the wireless enterprise's desktop software utility **140**, if that is installed on the user's PC **134**. For example, at **238**, the user modifies the out-of-office reply e-mail setting **204** at the user's PC **134** and/or the wireless enterprise's desktop software utility **140** running suitable mail client software (e.g., Microsoft® Outlook®). The only e-mail setting that would be made via the email program (e.g., Microsoft® Outlook®) on the PC **134** would be the e-mail setting **204**. The other of the e-mail settings **248** would all be made by the desktop software utility **140**. Then, the steps work in reverse to get the updates out to the user's handheld device **4** as well. At **240**, this change is noticed. For example, the ES **216** may periodically monitor and/or be notified of the e-mail settings and/or the ES **216** may subscribe to events that are published by the mail server **218**. Finally, at **242**, the ES **216** sends the change wirelessly to the wireless handheld electronic device **4**, which responsively updates its memory **20** (FIG. **2**) with the new e-mail setting (s).

For example, the mail server **218** is adapted to independently update a change to the out-of-office reply e-mail setting from a remote client device including mail client software, such as the remote PC **134**. The ES **216** is adapted to periodically monitor, or be notified of changes to, the out-of-office reply e-mail setting of the mail server **218** and to wirelessly send a change thereof to the wireless handheld electronic device **4**.

A suitable firewall (FW) **244** is preferably employed between the device **4** and the ES **216**. Preferably, there is true "end to end" encryption between the enterprise server **216** and the device **4**, such that the device **4** is truly an extension that is "behind" the virtual firewall **244**.

A system **246** includes the wireless handheld electronic device **4**, and one or more servers, such as the ES **216** and the MS **218**. The device **4** includes a plurality of e-mail settings **248** associated therewith. The database store (DS) **230** of the ES **216** maintains one or more of those e-mail settings **248**. The ES **216** is adapted to wirelessly communicate with the wireless handheld electronic device **4**, which is adapted to remotely control one or more of the e-mail settings **248** at one or both of the servers **216**,**218** through wireless communication between the ES **216** and the device **4**.

While for clarity of disclosure reference has been made herein to the exemplary display **60** for displaying information, such as e-mail setting information, it will be appreciated that such information may be stored, printed on hard copy, be computer modified, or be combined with other data. All such processing shall be deemed to fall within the terms "display" or "displaying" as employed herein.

While specific embodiments of the invention have been described in detail, it will be appreciated by those skilled in the art that various modifications and alternatives to those details could be developed in light of the overall teachings of the disclosure. Accordingly, the particular arrangements disclosed are meant to be illustrative only and not limiting as to the scope of the invention which is to be given the full breadth of the claims appended and any and all equivalents thereof.

What is claimed is:

1. A cellular handheld electronic device comprising:
an input device;
a wireless communications port; and
a processor in communication with the input device and the wireless communications port, the processor being configured to:
detect, at the input device, input of an out-of-office reply setting comprising an instruction to enable the out-of-office reply setting and a date for disabling the out-of-office reply setting, the out-of-office reply setting comprising a change to an out-of-office reply setting previously stored at the cellular handheld electronic device and in the account at the server; and
send, using the wireless communications port, the detected out-of-office reply setting for storage at a server for an account associated with said setting, wherein the processor is configured to send the detected out-of-office reply setting by wirelessly sending said setting for receipt by an enterprise server in communication with a mail server comprising the account.

2. The cellular handheld electronic device of claim 1, wherein the cellular handheld electronic device is associated with the account.

3. The cellular handheld electronic device of claim 1, wherein the out-of-office reply setting comprises auto-reply text.

4. The cellular handheld electronic device of claim 1, wherein the processor is further configured to receive, using the wireless communications port, a change to an out-of-office reply setting previously stored in the account at the server, and to store said change at the cellular handheld electronic device.

5. The cellular handheld electronic device of claim 1, wherein the cellular handheld electronic device comprises a mobile handheld device.

6. A cellular handheld electronic device comprising:
a wireless communications port;
a memory;
a display;
a touch-based input device; and
a processor in communication with the wireless communications port, memory, display and touch-based input device, the processor being configured to:
detect, at the touch-based input device, input of an out-of-office reply setting, the out-of-office reply setting comprising instructions including auto-reply text, a date for disabling the out-of-office reply setting, and an instruction to enable the out-of-office reply setting, the out-of-office reply setting comprising a change to an out-of-office reply setting previously stored at the cellular handheld electronic device and an account at a mail server; and
send, using the wireless communications port, the detected out-of-office reply setting for storage in an email account associated with said cellular handheld electronic device at an email server, wherein the processor is configured to send the detected out-of-office reply setting by wirelessly sending said setting for receipt by an enterprise server in communication with the mail server comprising the account.

7. The cellular handheld electronic device of claim 6, wherein the processor is further configured to output, using the display, the detected out-of-office reply setting.

8. The cellular handheld electronic device of claim 6, wherein the processor is further configured to receive from the email server, using the wireless communications port, a previously set out-of-office reply setting.

9. A method comprising:
detecting input of an out-of-office reply setting at a cellular handheld electronic device, the out-of-office reply setting comprising an instruction to enable the out-of-office reply setting and a date for disabling the out-of-office reply setting, the out-of-office reply setting comprising a change to an out-of-office reply setting previously stored at the cellular handheld electronic device and an account at a mail server; and
wirelessly sending, from the cellular handheld electronic device to an enterprise server in communication with the mail server comprising the account, the detected out-of-office reply setting for storage at the mail server for the account associated with said setting.

10. The method of claim 9, wherein the account is associated with the cellular handheld electronic device.

11. The method of claim 9, wherein the account is an email account.

12. The method of claim 9, wherein the out-of-office reply setting comprises an auto-reply text.

13. The method of claim 9, further comprising the cellular handheld electronic device receiving, from the server, a change to an out-of-office reply setting previously stored in the account at the server, and storing said change at the cellular handheld electronic device.

14. The method of claim 9, wherein the cellular handheld electronic device is a mobile handheld device.

15. A system, comprising:
at least one server comprising settings stored in an account, the at least one server being configured to communicate with a cellular handheld electronic device, wherein the at least one server comprises an enterprise server configured to receive the detected out-of-office reply setting from the cellular handheld electronic device and a mail server in communication with the enterprise server configured to receive and store the detected out-of-office reply setting from the enterprise server; and
the cellular handheld electronic device comprising:
an input device;
a wireless communications port;
a processor in communication with the input device and the wireless communications port, the processor being configured to:
detect, at the input device, input of an out-of-office reply setting comprising an instruction to enable the out-of-office reply setting and a date for disabling the out-of-office reply setting, the out-of-office reply setting comprising a change to an out-of-office reply setting previously stored at the cellular handheld electronic device and in the account; and
send, using the wireless communications port, the detected out-of-office reply setting to the at least one server for storage for said account, wherein the processor is configured to send the detected out-of-office reply setting by wirelessly sending said setting for receipt by the enterprise server in communication with the mail server.

16. The system of claim 15, wherein the cellular handheld electronic device is associated with the account.

17. The system of claim 15, wherein the mail server is configured to receive a change to said out-of-office reply setting thus stored and to provide said change to the enterprise server, and the enterprise server is configured to transmit said change to the cellular handheld electronic device.

18. The system of claim **15**, wherein the cellular handheld electronic device and enterprise server are configured to communicate over an encrypted channel.

19. The system of claim **15**, wherein the detected out-of-office reply setting comprises auto-reply text.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 8,423,011 B2
APPLICATION NO. : 12/647797
DATED : April 16, 2013
INVENTOR(S) : Andrew D. Bocking

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page, In Column 1 (Inventors), Item [75], Line 4, Delete "Kirchener" and insert -- Kitchener --, therefor.

Title Page 2, In Column 1 (Other Publications), Item [56], Line 18, Delete "docurnentation" and insert -- documentation --, therefor.

Title Page 2, In Column 1 (Other Publications), Item [56], Line 32, Delete ""SlackBerry" and insert -- "BlackBerry --, therefor.

Signed and Sealed this
Third Day of December, 2013

Margaret A. Focarino

Commissioner for Patents of the United States Patent and Trademark Office